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THE ALBERTA SURVEY 1991

SAMPLING REPORT

by

Cliff Kinzel and David Odynak

Population Research Laboratory
Department of Sociology
The University of Alberta

The 1991 Survey was administered by
the Population Research Laboratory and
the Department of Sociology at
The University of Alberta.

Study Director: Harvey Krahn

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INTRODUCTION

The 1991 Alberta Survey (AS) was the fifth annual provincial survey administered by the Department of Sociology, University of Alberta, through its research facility, the Population Research Laboratory (PRL). This random sample survey of households in the province of Alberta has enabled academic researchers, local community agencies, and government departments to explore a broad spectrum of social issues in an on-going research framework.

This report describes the sampling design, data collection methods, and weighting technique used in the 1991 Alberta Survey. Also, a brief demographic profile of the sample and a description of the data collection statistics are presented. Subsequent papers on research findings from the AS 1991 will be announced in the PRL's "In Summary" newsletter.

SAMPLING DESIGN

Main features of the sampling design are as follows:

a. Province of Alberta delineated into three areas for telephone interviewing.
   (1) City of Edmonton.
   (2) City of Calgary.
   (3) Remainder of the Province (Other Alberta).

b. Two-stage selection process.
   (1) Selection of households.
   (2) Selection of respondent within each household.

To permit the analysis of each area as a separate entity a minimum sample size of 400 or more for each area of the province was deemed necessary.

The population universe designated for telephone interviewing was all persons 18 years of age or older who, at the time of the survey, were living in a dwelling unit in Alberta that could be contacted by direct-dialing. From this population, three samples were drawn to cover the areas: the City of Edmonton (EAS)[1], the City of Calgary, and the remainder of the region.

For the past five studies, the PRL has annually developed and updated computer files of five-digit telephone banks covering all of Alberta. The samples were drawn from these files by selecting, with replacement, a simple random sample of banks for each area and appending a random number between 00 and 99 to each number selected. All duplicate numbers were discarded.

Nursing homes and temporary residences were screened from the sample. Within the household, one eligible person was selected as the respondent for the forty minute interview.

A respondent was selected within each household on the basis of gender using the following selection guidelines to ensure an equal selection of male and female participants[2].

a. The dwelling unit must be the person's usual place of residence and he/she must be 18 years of age or older.

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[1]The Edmonton sample is referred to as the Edmonton Area Study (EAS). Prior to the inception of the Alberta Survey, only the City of Edmonton was annually surveyed. This year was the first time interviewing in Edmonton was done by telephone rather than by face-to-face.

[2]Past surveys have indicated that 60% of the time the first household contact is female.

b. If an adult male answers the phone and is willing to be interviewed, he is the respondent.

c. If an adult female answers the phone and there is an adult male present who is willing to be interviewed, interview the male. If the male is not willing to be interviewed, and the female is willing, interview the female.

d. If an adult female answers the phone and there is no adult male present, choose her as the respondent.

Table 1 shows the final breakdown of the telephone samples by gender of the respondent.

TABLE 1
SAMPLE SIZES BY AREA AND GENDER

	Edmonton	%	Calgary	%	Other Alberta	%	Total	%
Male	245	49.9	226	50.7	196	48.0	667	49.6
Female	246	50.1	220	49.3	212	52.0	678	50.4
Total	491	100.0	446	100.0	408	100.0	1345	100.0

THE QUESTIONNAIRE

The special topic for the 1991 Study was: "Political Culture in Alberta." In addition, the questionnaire contained a wide variety of questions reflecting the specific research interests of the University researchers and outside agencies participating in the Study. A few questions were replications from previous EAS and AS questionnaires[3]. The questionnaire was pretested by professional interviewers on a total of fifty-three Edmonton area households. From the findings of the pretest, modifications were made to the questionnaire before the main interviewing began. All questions were submitted to a University Ethics Committee to ensure suitability for administration to the general public.

DATA COLLECTION

The interviewing began February 4th and was completed by the end of March. Ninety-five percent of the telephoning was completed from a supervised location at the University of

[3]See Appendix A for the subject areas included in the questionnaire.

Alberta. Interviewing was conducted everyday of the week throughout the data collection period (See Table 3). A total of twenty-six trained interviewers completed the interviewing. The average telephone interviewer completed 52 interviews.

If the interviewers were unsuccessful in establishing contact on their first call, they were to make ten callback attempts before declaring a telephone number as "no contact."[4] Upon making contact, the interviewer identified herself/himself,[5] verified the telephone number, and then asked the screening questions for selecting the respondent. Before administering the questionnaire the interviewer advised the respondents that their participation was voluntary, their responses would be kept completely confidential and they could stop the interview at any time.[6] Thirty-one percent of the respondents were re-contacted by the supervisors either for interview verification or for obtaining additional information. No significant discrepancies or irregularities were found.

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[4]About 8% of the completed interviews required more than ten callbacks. All "no contact" numbers were verified by the telephone companies as working residential numbers.

[5]Six of the twenty-six interviewers were male.

[6]See Appendix B for the telephone introduction used.

Figure 1, shows the percentage of the interviews obtained according to the number of callbacks. With the Edmonton sample 17% of the interviews were obtained on the initial call while with the Calgary sample 25% were obtained with a single telephone call. Twenty-seven percent of the interviews in the rest of the province were completed on the initial call.

FIGURE 1

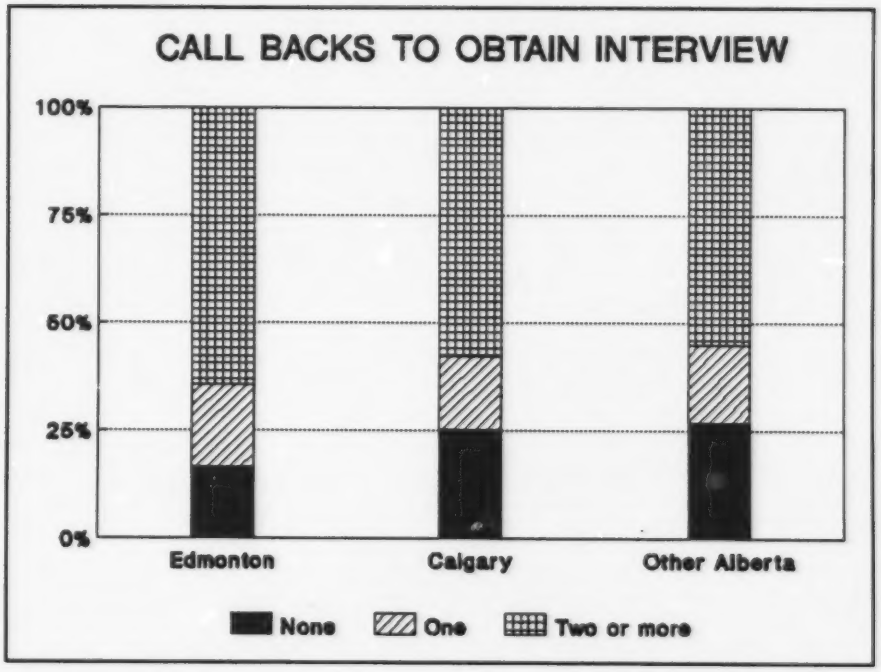
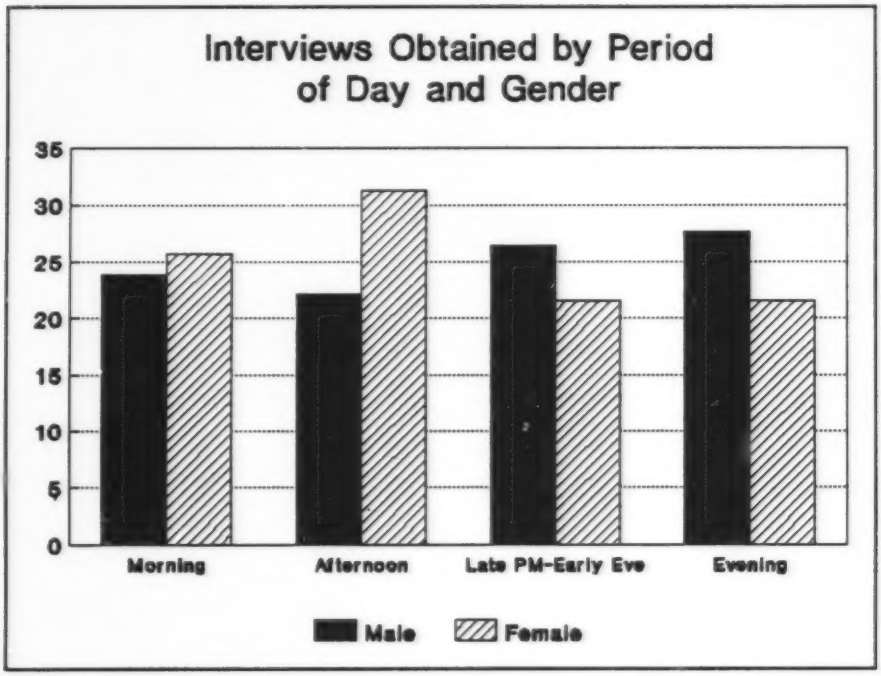


Figure 2 shows the percentage of the total interviews obtained in four time periods[7] of the day by gender of the respondent. The chart reveals that after 4:00 pm more male householders are present in the home for an interview than before 4:00 pm.

FIGURE 2



[7]The actual hours to represent the time periods were: Morning - 8:50 am to 12:00 pm; Afternoon - 12:01 pm to 4:00 pm; Late afternoon and early evening - 4:01 pm to 7:00 pm; Evening - 7:01 pm to 9:40 pm. The start time of the interview was used to determine the time period in Figure 2.

Tables 2 and 3 show additional data collection statistics for the three samples.

TABLE 2

DATA COLLECTION SUMMARY

	Edmonton %	Calgary %	Other Alberta %
1st contact interviews	16.5	25.3	27.0
Without appointment interviews	63.1	67.0	65.9
Responses rates	71.1	73.7	77.9
Median interviewing time (minutes)	41	36	38
Sample size	491	446	408

TABLE 3

INTERVIEW PERIOD START TIME BY DAY OF THE WEEK

	Sunday %	Weekday %	Saturday %
Morning	23.0	24.8	31.5
Afternoon	35.4	26.8	42.0
Late PM-Early Evening	23.6	23.9	15.4
Evening	18.0	24.5	11.2
Total	100.0	100.0	100.1[a]

[a]Totals may not equal 100% owing to rounding error.

Table 4 shows the breakdown of the initial sample selections.

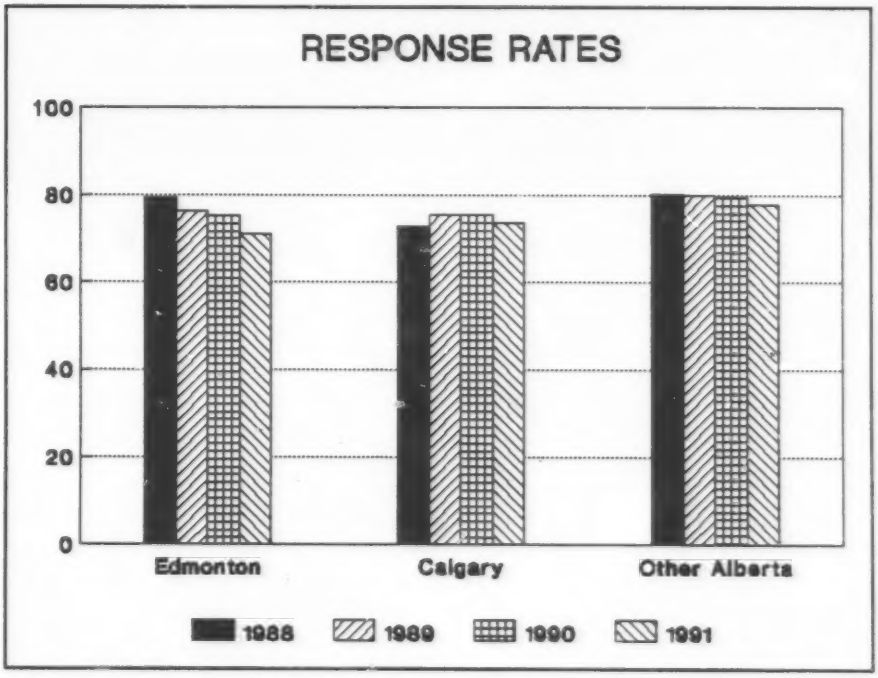
TABLE 4

BREAKDOWN DISPOSITIONS OF ORIGINAL SAMPLES
1991

	EDM	CAL	OTHER ALBERTA	TOTAL	EDM %	CAL %	OTHER ALBERTA %	TOTAL %
Samples as Drawn	1168	1075	1091	3334	100.0	100.0	100.0	100.0
Deduct:								
non-residential/ ineligible	211	243	211	665	18.1	22.6	19.3	19.9
not in service/ vacant	264	223	348	835	22.6	20.7	31.9	25.0
2nd residence	2	4	8	14	0.2	0.4	0.7	0.4
Corrected Sample	691	605	524	1820	59.1	56.3	48.1	54.7
Corrected Sample Breakdown								
Completed interviews	491	446	408	1345	71.1	73.7	77.9	73.9
Incomplete interviews	4	5	6	15	0.6	0.8	1.1	0.8
No answer/contact	38	33	27	98	5.5	5.5	5.2	5.4
Refused	128	96	73	297	18.5	15.9	13.9	16.3
language problem	26	22	5	53	3.8	3.6	1.0	2.9
illness/age	4	3	5	12	0.6	0.5	1.0	0.7
Total	691	605	524	1820	100.1	100.0	100.1	100.0

Figure 3 shows the response rates for the three samples for the past four years. The 1991 response rate for Calgary was 73.7%, for Edmonton 71.1% and 77.9% for the rest of Alberta. Although the response rate for Edmonton shows a slight downward trend, the 1991 response rate for all three samples is excellent by survey standards.

FIGURE 3



CALCULATION OF WEIGHTS

The final sample obtained for each area is not proportional to the Alberta population it represents. For instance, Edmonton is purposely over-sampled. Edmonton makes up only 25% of the Alberta population but has 37% of the interviews. Therefore, in order to combine the samples for a provincial sample, weighting is necessary.[9] Table 5 contains the information used to calculate the weights.

TABLE 5

CALCULATION OF WEIGHTS

Sample Area	1986 Pop.[10] 20+ Years	Percentage of Pop.	Sample Size	Percentage of Sample	Weight Factor	Weighted Sample
Edmonton	413,535	25.490426	491	36.505576	0.698261	343
Calgary	454,785	28.033089	446	33.159851	0.845392	377
Rural	753,995	46.476486	408	30.334572	1.532129	625
TOTAL	1,622,315	100%	1345	100%		1345

DATA

The raw data file exists as an 80 column/record rectangular data set stored on magnetic tape. The data were tabulated and cleaned using the OSIRIS and SPSSx statistical packages, and special programs developed by the PRL. The data cleaning process included wild code, discrepant value, and consistency checks. The resultant data set contains 292 variables for each case. There are a total of 1345 cases with 7 records per case. A SPSSx system file with a dictionary has been created to analyze the data. Until January 1st, 1992, access to the 1991 AS data has been restricted to agencies and persons who submitted questions for the survey.

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[9] If the samples are analyzed individually, then no weighting is necessary; for example, if the researcher is only interested in the Edmonton responses. In the SPSSx systems file the weight variable is: WT. By default the weighting is on and is turned off with the procedure command: WEIGHT OFF. To turn weighting back on insert: WEIGHT BY WT.

[10]Statistics Canada, "Census of Canada, 1986. Profiles CDs & CSDs, Alberta." Catalogue 94-117. Ottawa.

DEMOGRAPHIC PROFILE

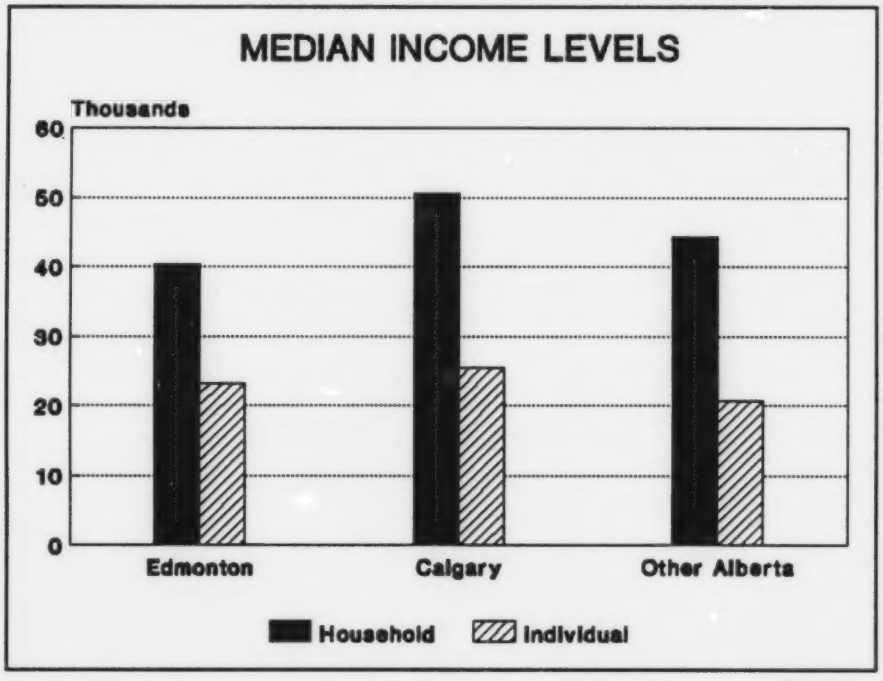
Table 6 presents some of the major demographic characteristics of the three sample areas.

TABLE 6
DEMOGRAPHIC PROFILE OF RESPONDENTS

Characteristic	Edmonton %	Calgary %	Other AB %
Religion			
Protestant	48	56	62
Roman Catholic & Other Catholic	28	20	22
Other	4	2	1
No religion	20	22	15
Education (years of schooling)			
less than 12 years	18	18	30
12-15 years	57	56	52
16+ years	25	27	18
Dwelling Unit			
Single-detached house	55	63	69
multiple family apartments	28	19	9
row/townhouse	12	9	6
semi-detached/duplex	5	8	4
other types	1	1	12
Employment Status			
full-time	53	59	50
part-time (no full-time job)	13	12	15
Home Ownership			
own	49	64	72
rent	51	36	28
Median Age in Years	35	36	37

Household and individual income distributions for the three sample areas are presented in Figure 4. Calgary had the highest median household income at $50,606 while Edmonton had the lowest at $40,441. Other Alberta household income was $44,400. With respect to individual income Calgary had the highest at $25,429, Edmonton had $23,273 while the rest of the province had the lowest at $20,762.

FIGURE 4



SAMPLE REPRESENTATIVENESS

The AS age distributions and marital status distributions are compared to the most current Statistics Canada data[11] on Alberta in Tables 7 and 8 respectively. The 1991 EAS age distributions are compared to the 1989 City of Edmonton Civic Census age distributions in Table 9. The indexes of dissimilarity[12] for each table demonstrate that the samples adequately reflect the populations from which they were drawn on these dimensions.

TABLE 7

AGE DISTRIBUTIONS FOR ALBERTA

Age Groups	Postcensal Alberta 1990[13] %	AS 1991 %
20-29	25.3	27.2
30-39	27.3	29.3
40-49	18.6	18.2
50-59	12.3	9.2
60+	16.4	16.1
Total	99.9	100.0
Index of Dissimilarity: 3.9		

[11]Statistics Canada data was only available in five-year age groups. Therefore, respondents ages 18 and 19 are omitted from the tables.

[12] The index represents the proportion of households that would have to move to a different category to make the distributions identical. The index can vary from 0 to 100. Any index less than 10 indicates that their distributions are similar. Source: Duncan, O.D., and Duncan, B. "Residential Distribution and Occupational Stratification." American Journal of Sociology, 60(5):493, March 1955.

[13]Statistics Canada, "Postcensal Annual Estimates of Population by Marital Status, Age, Sex and Components of Growth for Canada, Provinces and Territories, June 1, 1990." Catalogue 91-210, Volume 8. Ottawa.

TABLE 8

MARITAL STATUS DISTRIBUTIONS FOR RESPONDENTS 20 YEARS OF AGE OR OLDER

Marital Status	Postcensal Alberta 1990 %	AS 1991 %
Single	19.6	18.2
Married[14]	68.8	69.4
Divorced	5.6	6.8
Widowed	6.1	5.7
Total	100.1	100.1
Index of Dissimilarity: 1.8		

TABLE 9

AGE DISTRIBUTIONS FOR THE EDMONTON CENSUS[15] AND EAS

Age Groups	Census 1990 %	EAS 1991 %
20-29	28.9	32.8
30-39	26.2	27.3
40-49	16.0	16.2
50-59	11.6	8.0
60+	17.3	15.8
Total	100.0	100.1
Index of Dissimilarity: 5.2		

[14]Includes persons now married, separated (legally or otherwise but not divorced) and persons in common-law unions.

[15]Edmonton Demographic Indicators, 1990. City of Edmonton, May 1991.

TIME SHARING ON THE ALBERTA SURVEY

Persons and organizations who are interested in submitting questions for the 1992 project on a time-sharing basis should contact the Director of the PRL before the end of September (1991). The Study's schedule will be as follows:

4th week of September	- deadline for question submission
3rd week of November	- pretest questionnaire finalized
4th week of November	- pretest
3rd week of December	- questionnaire finalized
1st week of February	- interviewer training
February and March	- data collection
April and May	- coding, data entry, and data cleaning
June 30th	- data ready for analysis

APPENDICES

APPENDIX A

SUBJECT AREAS INCLUDED IN THE 1991 ALBERTA SURVEY

1. Demographic Characteristics of Population

   Household composition, age, gender, marital status, education, income, religion, country of birth, ethnicity, language first learned, occupation, and dwelling unit type

2. Health
   - (1) Personal well-being
     - (i) Meaning of
     - (ii) Sources of
     - (iii) Importance of specific aspects
   - (2) Local health service awareness
     - (i) Care for elderly relatives
     - (ii) In relation to work
     - (iii) Support provided

3. Environment
   - (1) Attitudes
   - (2) Recycling

4. Education
   - (1) Public and Separate School system
     - (i) Improvements needed
     - (ii) Satisfaction with
     - (iii) Personal evaluation
   - (2) Alberta Universities
     - (i) Contact with
     - (ii) Attendance anticipation
     - (iii) Funding
     - (iv) Contribution of
     - (v) Evaluation of
     - (vi) Other issues

5. Other Topics
   - (1) Alberta political issues
   - (2) Native Canadian issues
   - (3) Nuclear war and related issues
   - (4) Women's role issues
   - (5) Teenage pregnancy
   - (6) Ethnic and cultural group issues
   - (7) Impaired Driving
     - (i) Behaviour
     - (ii) Penalties
   - (8) Television viewing

(9) Work disagreements
    (i) With employees
    (ii) With employer/supervisor
(10) Political party preference
(11) Travel to Calgary
(12) Financial betterment

APPENDIX B

TELEPHONE INTRODUCTION INTRO SHEET 1991

1. Hello, I'm, calling (*long distance*) from the Population Research Lab at the University of Alberta. My name is ... **(full name or Mr./Mrs. XXXXX)**

2. I have dialed XXX-XXXX. Is this correct?

3. Your telephone number was selected at random by computer.

4. Just a moment of your time to explain why I'm calling.

5. The Lab at the University, is currently conducting an important study on current issues (*such as education, personal well-being, multiculturalism, political and social issues*).

6. In order to determine who is eligible for the study, please tell me how many women and men aged 18 or over live on a regular basis at this number?

   NUMBER OF WOMEN _____ and NUMBER OF MEN _____

7. This total includes yourself as a member of this household over the age of 18?

REQUESTING AN INTERVIEW WITH PERSON WHO ANSWERS THE PHONE

8. I would like to interview you. I'm hoping that now is a good time for you. Your opinions are very important for the work that is being done at the University of Alberta.

9. Before we start, I'd like to assure you that your participation is voluntary and that any information you provide will be kept completely confidential and anonymous. As I mentioned there are a wide variety of questions. If any of them you do not wish to answer, please feel free to point these out to me and we'll go on to the next question. You of course have the right to terminate the interview at any time.

(OPTIONAL READ)

We do not need your name, so that no one will know your answers to these questions. If you have any questions about the survey, you can call the Population Research Lab in Edmonton at 492-4659 for further information.

ALBERTA/EDMONTON SERIES REPORTS

59. Recent Trends in Public Support for Unions.
Graham S. Lowe and Harvey Krahn. May 1988.

60. Item Order Effects on the Measurement of Abortion Attitudes: A Quasi-Experimental Design.
Elisabeth TenVergert, Michael W. Gillespie and Johannes Kingma. July 1988.

61. Male Attitudes Toward Abortion: An Analysis of Urban Survey Data.
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64. Telephone and Face-to-Face Interviewing: A Comparison.
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65. All Alberta Study 1989 (Including The Edmonton Area Study) Sampling Report.
Cliff Kinzel. June 1989.

66. Public Opinion Regarding AIDS Policy: Fear of Contagion and Attitude Toward Homosexual Relationships.
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67. Public Opinion Regarding the Economic Support of Seniors.
Herbert C. Northcott. April 1990.

68. Graduate Training in Survey Research: The Potential of Area Studies.
D.R. Forde, D. Odynak, R. Currie, and H. Krahn. May 1990.

69. 1990 All Alberta Study (Including The Edmonton Area Study) Sampling Report.
Cliff Kinzel and David Odynak. June 1990.

70. The Utilization of Prescription Medicines, Non prescription Medicines and Alternative Health Care Therapies.
Herbert C. Northcott and John A. Bachynsky. August 1990.

71. Feminism and Religious Behaviour: Greeley Revisited in Western Canada.
Timothy F. Hartnagel. October 1990.

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Harvey Krahn and Trevor Harrison. February 1991.

73. The Social Context of Recycling in Alberta.
Linda Derksen and John Gartrell. April 1991.